



WHITE SPUR EL 5/1996

FINAL REPORT
FOR THE PERIOD ENDING 5th APRIL 2006

Authors: A.W.McNeill and M. Skirka

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Copies To: Zinifex Rosebery Mine
Mineral Resources Tasmania

Submitted By:

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1. SUMMARY

This report details work undertaken on exploration licence 5/1996 White Spur between 5th March 2005 and 5th April 2006, year 10 of the licence. The principal exploration targets sought within the licence area are Hellyer- or Rosebery-type volcanogenic Pb-Zn-Cu-Ag-Au massive sulphide deposits.

Work completed during the reporting period included:

- Drilling of DDH WSP14 (494.6m) and DDH WSP15 (401.2m).
- DHEM surveys in DDH WSP12, WSP13, WSP14 and WSP15.
- Surface Fixed Loop TEM survey in the northern part of the license.
- Further geological mapping in the central part of the tenement.
- Completion of an Honours project to assess the volcanic stratigraphy of the tenement.

This work has not led to the location of any significant VHMS mineralisation or alteration and the target CVC/WSF contact is considered to have been effectively tested to a depth of 250-400m throughout most of the licence.

2. INTRODUCTION

This report details work undertaken on exploration licence 5/1996 White Spur (Figure 1), between 5 March 2005 and 30 May 2006, year 10 of the licence.

The White Spur licence covers a portion of the Cambrian Mount Read Volcanics to the south of the Rosebery and Hercules Mines and to the west of the Henty Mine in Western Tasmania (Figure 2). The principal exploration targets sought within the licence area are Hellyer- or Rosebery-type volcanogenic Pb-Zn-Cu-Ag-Au massive sulphide deposits. A 5 km strike length of the contact between the White Spur Formation (WSF) and the Central Volcanic Complex (CVC), a stratigraphic position that is a direct correlate of the Rosebery and Hercules ore positions; although not recognised as such until the mid-1990's, runs through the centre of the tenement and has been the main target of recent exploration. A second and less well understood target is the Jones Creek package, in the NE part of the tenement. This sequence of shales and fine volcanogenic sediments associated with rhyolitic intrusives, is thought to correlate with the Rosebery host position, but, correlations are not as clear as for the base of the White Spur Formation due to structural complications.

Access into the tenement is via Howards Rd. (off the Anthony Rd) or on 4WD tracks (in particular the Moores Pimple track) heading south from Mt Read and the Hercules Mine. Within the EL access is via a series of old logging tracks and a new HEC road, which follows a major canal.

Attribution

The following personnel were responsible for the work carried out within the White Spur licence area during the reporting period:

| | |
|---------------------------|--|
| Senior Geologist: | Andrew McNeill - Zinifex Rosebery Mine |
| Senior Contract Geologist | Mick Skirka - Skirka Geological Services |
| Student Geologist | Chris Booth – University of Tasmania |
| Student geologist | Jodi Fox – University of Tasmania |
| Consultant Geophysicist: | Jovan Silic – Jovan Silic and Associates |

3. LAND TENURE

White Spur EL 5/1996, 20 sq km, was granted to RGC exploration on 5 April 1996 after a successful bid on ETA 401 (resulting from the relinquishment of EL 11/85 by a Pasminco/North Ltd./Australian Resources JV). In June 1998 RGC merged with Westralian Sands to form a new company, Iluka Resources, whose core activity was mineral sand mining. As a result RGC's gold and base metal interests were to be divested. Goldfields Exploration commenced negotiations with Iluka for the transfer of all RGC's Tasmanian tenements to Goldfields in 1998 and these negotiations were concluded in July 2000. However, by this time Goldfields were focussed almost exclusively on gold exploration and they decided to seek a joint venture partner for the base metal prospective White Spur tenement.

In August 2000 Goldfields approached Pasminco Exploration with the proposal for a direct swap of EL 5/1996 for Pasminco's EL 6/98 Queenstown. An agreement was signed in May 2001, and the tenement was transferred to Pasminco Australia Limited on 2nd August 2002. A subsequent 50% reduction of EL 5/1996 White Spur occurred in April 2003.

Land covered by EL 5/1996 comprises land vested in the HEC (105 ha) with the remainder being Crown Land designated as Deferred Forests. The EL is almost entirely within the Mt Dundas Regional Reserve (exploration allowed, but, programs must be approved by the MEWG).

4. GEOLOGY

The regional geology of EL 5/1996 White Spur is described on MRVP Map 3 (Corbett, 1986) and in Vicary (1997, 1998). Some areas have been mapped in more detail as Honours (Dugdale, 1992; Nunn, 1995) and M Econ. Geol. (Poltock, 1992) theses.

The regional geological framework of the Mt Read Belt (MRB) is subdivided, from an exploration perspective, into three elements. The central MRB covering the area of outcrop from south of Queenstown to north of Hellyer, the northern MRB covering the area from Black Bluff eastwards through Gowrie Park and Mole Creek, and the Southern MRB comprising areas west and south of Macquarie Harbour. EL 5/1996 is in the central part of the central MRB.

Basement in the Central and Northern MRB is of Precambrian age, comprising predominantly greenschist facies meta-sediments with minor basalts and dolerites. Higher-grade amphibolite and eclogite facies are also present within the Precambrian. This Precambrian basement termed the Tyennan Block, lies to the east of the White Spur licence.

Cambrian volcanism and sedimentation developed on the Precambrian continental crust and, in the Central MRB, is subdivided into the Eo-Cambrian Tholeiitic Crimson Creek Formation (CCF), the mid to late Cambrian Dundas Group and the predominantly calc-alkaline, Mt Read Volcanics (MRV).

The CCF was deposited in shallow but rapidly subsiding basins comprising basaltic lavas and volcanoclastics, turbidites, carbonates, chert and minor evaporites. Ultramafic cumulates and volcanic equivalents were thrust onto the CCF in the mid Cambrian. They are absent from the licence area.

The MRV in the area of EL 5/1996 can be subdivided into three main units; the WSF, CVC and Henty Fault Wedge Sequence. Of these only the first two are part of the VHMS prospective sequence.

The White Spur Formation was formally defined by Corbett and Lees (1987) as a west facing sequence of felsic tuff, siltstone, greywacke and slate that unconformably overlies the Central Volcanic Complex between the North Henty Fault and Williamsford. It is conformably overlain by Dundas Group type conglomerates, quartzwacke, mudstone and lithicwacke on the western end of Howards Road. The abundance of quartz-phyric detritus in the White Spur Formation may suggest derivation from Tyndall Group rocks located to the east of the Henty Fault Zone.

The WSF can be divided into eight mappable sedimentary lithofacies in the White Spur area (Vicary 1997, 1998). These are:

- A Black pyritic siltstones
- B Micaceous volcanoclastic sediments
- C Ashy volcanoclastic siltstones
- D Medium – fine grained volcanoclastic sandstones

- E Crystal-rich volcanoclastic sandstones
- F Coarse lithic rich volcanoclastic conglomerate

The internal stratigraphy of the WSF is complex, but, in general in the northern part of EL 5/1996 the CVC are directly overlain by coarse mass flow deposits (Facies F), whereas to the south finer grained lithologies (particularly Facies A and B) predominate. In addition there are intrusive feldspar-quartz-phyric rhyolite and quartz-feldspar porphyry bodies at different levels in the sequence. Clasts of sulphide have been identified in the basal mass flow deposits of the WSF to the north of 5362200mN. These clasts are considered to have been derived from the erosion of the sulphide deposits by down-slope mass flow movements.

The CVC comprises largely feldspar-phyric dacitic pumiceous sandstone and breccia, with lesser intrusive Quartz-feldspar porphyry and minor feldspar-phyric rhyodacitic lava. In addition to these typical CVC lithologies, feldspar-pyroxene-hornblende-phyric pumice breccia and rhyolitic sills are present in some drill holes (e.g., WSP7; Allen, 1998).

In the Jones Creek area, typical CVC-“type” pumice breccia and lava hosts a package of up to 400m of shale, sandstones and crystal-rich (feldspar>quartz) volcanoclastic sandstones (Corbett, 1986; Corbett in Vicary and Dauth, 1999). It is possible that this “Jones Creek Shale Sequence” is a correlate of the Rosebery-Hercules hangingwall shale sequence. Parts of the Jones Creek Sequence are strongly sericite altered (but, without the pyrite typical of VHMS alteration) and mineralisation comprises disseminated and vein pyrite-pyrrhotite-sphalerite-galena, generally best developed in shale/sandstone units. The best overall intersection was 32m @ 0.22% Zn, 0.09% Pb in DDH JCP211 (drilled to the north of the current EL 5/1996).

Base-metal poor massive pyrite lenses are hosted in intensely sericite altered CVC close to the WSF contact, and the North Henty Fault, in the south of the licence (the Annaliese Prospect). This mineralisation has a possible Cambrian age, based on Pb isotopes (Vicary, 1997), but has extremely light S isotopes (-10 to -17‰), dissimilar to any known Cambrian mineralisation from western Tasmania. No other significant mineralisation or alteration has been located in the CVC on the licence area.

Thin mafic dykes/sills (generally <5m, but up to 80m wide) are common within the Central Volcanic Complex in the eastern part of the EL and are correlated with the tholeiitic Henty Dyke swarm.

In the South eastern corner of the tenement the CVC is separated from the Henty Fault Wedge Sequence by the North Henty Fault (Figure 2). The Henty Fault Wedge Sequence (or Henty Valley Sequence; Poltock, 1992) comprises a west facing sequence of quartz sandstone, chert, hematitic greywacke/sandstone and minor tholeiitic basaltic andesite. These lithologies are considered to correlate with units in age from the Eo-Cambrian Crimson Creek Formation to the mid-Cambrian Mount Read Volcanics (Poltock, 1992). This sequence is not considered to be VHMS prospective.

Pleistocene glacial deposits, consisting predominantly of Cambrian volcanic, Cambro-Ordovician Owen Conglomerate and Jurassic dolerite (on the eastern slopes of Mt Dundas) derived clasts, are common throughout the tenement.

5. PREVIOUS EXPLORATION

The area of EL 5/1996 White Spur has a long history of ‘modern’ exploration, commencing in the 1950’s, that has been reviewed in detail by several authors (Purvis et al., 1983; Poltock and Fitzgerald, 1991; Fitzgerald, 1987; Vicary, 1997 and Corbett, in Vicary and Dauth, 1999). All previous exploration is summarised on Tables 1 and 2.

In the period 1957-1962 the area was explored by Rio Tinto Australia Exploration as part of SPL320 and ELs 4/1959 and 6/1959. From 1962 onwards the area has a complicated tenement history, dominated by ELs 9/66 (RGC), to the south, and 1/62 (EZ Co.) to the north.

EL 1/62 was initially granted to the EZ Company, but after 1978 was subject to a joint venture with the Getty Oil Development Company (GODC). EZ managed the JV from 1978-1983 at which point GODC assumed management (thus permitting exploration in conjunction with that on EL 9/66 to the south). However, in 1985 GODC’s share of the JV was sold to Little River Goldfields NL and in October 1985 a new agreement was entered into between Shell Company of Australia, Little River Resources and the EZ Company, with Shell managing and operating the tenement. In January 1988 EL 1/62 was relinquished, with the northern part of the tenement being incorporated into the “Rosebery Extension leases” (MLs 10M/88, 11M/88 and 15M/88) and the remainder being incorporated into EL 11/85 (see below).

EL 9/66 was granted in August 1966 and in the period to 1980 was gradually amalgamated with other tenements to reach a maximum area of 637 sq. km. The tenement area was then progressively reduced through voluntary (in 1983 and 1984) and statutory (in 1985) reductions with complete relinquishment, apart from that area retained as the Henty Mine leases, in 1987. The tenement was explored by Renison Goldfields Consolidated Ltd. until 1976 when a Joint venture agreement was signed with GODC, who maintained an interest in the area until 1985 at which time their interest was sold to Little River Goldfields, later Little River Resources.

Following the statutory partial relinquishment of EL 9/66 in 1985 the vacant areas were picked up by Amoco Minerals Australia as EL 11/85. Title was then transferred to Cyprus Minerals (1985), Cyprus Gold (1988), Hudspeth and Company (1990) and finally to Arimco (1991). In this period the tenement was subject to two joint ventures, the second of which between Hudspeth and Co., Norgold and Pasminco commenced on 4 December 1990 and continued until relinquishment in 1995, with Pasminco as operators and managers of the JV.

Table 1: Exploration on the area of EL 5/1996 prior to 1996

| Reporting Period | Work Completed |
|--|---|
| 1957-60 (King, 1960; McCarthy et al., 1960) | Helicopter borne EM in 1957 failed to locate any conductors. In 1960 the area was grided, geologically mapped and a TURAM survey completed; the 3 significant anomalies located by this survey were followed-up by Vertical EM, gravity, SP and magnetics; costeaning and drilling was recommended. |
| 1961? (Campana, 1962) | Drilling of DDH WSP103. |
| 1969-70 (Newnham, 1970) | Grid cut in upper part of White Spur Creek. |
| 1971-72 (McKibben, 1972) | White Spur Area: Re-open RTAE grids, mapping and limited rock-chip sampling. |
| 1971-72 (Reinhardt, 1972) | Turair survey, line cutting mapping and soil sampling (Dalwitz and White Spur Grids). |
| 1973-74 (Williams, 1974) | Geological mapping, grid extensions and soil sampling on the White Spur and Dalwitz grids. |
| 1974-75 (Stevens-Hoare, 1975) | Re-clear and extend grid, Re-log DDH WSP103, C horizon soil and rock-chip sampling and detailed mapping. |
| 1974-75 (Williams, 1975) | Mapping and soil geochemistry on the White Spur and Dalwitz grids. |
| 1975-76 (Stevens-Hoare, 1976) | Limited track cutting, further soil sampling (incomplete at the time of reporting) and mapping, which located a massive pyrite boulder (low base and precious metal assays). |
| 1976-77 (Walter and Brophy, 1977) | Extended existing grid, gradient array IP and ground magnetics completed; defined 13 main IP anomalies. Soil sampling indicated black shale units have high base metals (to 1500 ppm Pb) and correspond to IP anomalies. |
| 1977-78 (Walter, 1978) | White Spur Area: Infill gridding and EIP to follow-up anomalies; costeaning and soil sampling. Jones Creek Area: gridding, gradient array and dipole-dipole IP, ground magnetics, costeaning and associated rock-chip sampling, C horizon soil sampling and geological mapping; recommended that 2 x DDH test EIP anomalies. |
| 1978-79 (Reid et al., 1979) | White Spur Area: Additional mapping, soil and rock-chip sampling, ground magnetics and EIP. Jones Creek Area: DDH WSP1 completed (hole drilled outside area of current EL); hole intersected weakly mineralised and altered volcanics. IP explained by zones of up to 2% pyrite. |
| 1979-80 (Meares et al., 1980) | White Spur Area (EL 9/66): IP, Rock-chip and soil sampling to evaluate drill target on line 37.5N; DDH WSP2 tested this anomaly intersecting weak mineralisation in a black shale. |
| 1979-80 (Mill et al., 1980) | Dobsons Creek Area (EL 1/62): Re-peg and infill previous EZ grid, gradient array IP, C Horizon soil sampling of new lines and over IP anomalies, limited geological mapping. |
| 1980-81 (McDonald, 1981) | Dobsons Creek Area (EL 1/62): Mapping of grid and access tracks. Recommend drill testing combined IP/soil geochem target. |

Table 1: Exploration on the area of EL 5/1996 prior to 1996 cont....

| Reporting Period | Work Completed |
|--|--|
| 1981-1982 (Mathison and McDonald, 1982a; McDonald and Mathison, 1982; Mathison and McDonald, 1982b) | Dobsons Creek Area (EL 1/62): Access track completed and DDH DCP235 (161.6m) drilled to test IP/geochem. target; downhole IP survey failed due to blocked hole. Best assay 0.7m @ 1.45% Pb, 2.2% Zn, 11 g/t Ag from a fault. Concluded that there was insufficient alteration to warrant further work. |
| 1983 (Purvis et al., 1983) | Review of prospectivity of EL 9/66; reviewed previous work and did not recommend any further follow-up on the White Spur area. |
| 1983-1984 (Fitzgerald et al., 1984) | Jones Creek Area: Jones and Dobsons Creek cut open for mapping and sampling, roads and creeks mapped and rock-chip sampled |
| 1983-84 (Roberts and Cartwright, 1984; Fitzgerald and Pease, 1984) | White Spur Area: Exploration managed by Getty; reviewed previous exploration; concluded that further work warranted. Completed geological mapping, rock-chip sampling and a single loop UTEM survey. Some coverage by DIGHEM survey flown in December 1983. |
| 1984 (Fitzgerald and McNaught, 1985) | Jones Creek Area: geological mapping, re-opening of the EZ imperial grid, UTEM survey and VLF-EM; a low amplitude EM response located in Jones Creek. |
| 1985 (Purvis, 1985) | Jones Creek Area: Drilling of DDH JC1, which failed to intersect any significant mineralisation. |
| 1985 (Corbett, 1985) | Tasmania Department of Mines drilled a 108.7m DDH (MR1) to determine the nature and attitude of the WSF/CVC contact. |
| 1989 (Wyatt, 1990) | Helimag survey flown over EL 9/66 and vacant ground west of EL 9/66 by RGC; several anomalies and lineaments identified in the area of EL 5/1996. |
| 1990-1991 (Poltock and Fitzgerald, 1991) | Reconnaissance geological mapping, rock geochemistry and a review of previous exploration. Mapping located additional sulphide clasts in the WSF. |
| 1991-92 (Poltock, 1992) | Regional geological mapping (located a significant zone of Se-Fd-py alteration), lithochemical sampling, interpretation of gravity and magnetic data. |
| 1992 (Dugdale, 1992) | Honours study on "Lithostratigraphy of the White Spur area, western Tasmania". |
| 1992-93 (Quayle, 1993) | Geological mapping, collection of mag. Susc. data from outcrops, lithochemical sampling, interpretation of airmagnetic and radiometric data and a review of old geochemistry and IP surveys. |
| 1993-94 (Quayle, 1994) | The WSF/CVC contact was tested by a single 430.5m DDH (YWS1); no significant mineralisation was intersected. S.G. and Mag. Susc. data collected from drill core, further lithochemical assaying of rock-chips and core. |
| 1994-95 (Quayle, 1995) | Surface rock chip sampling of CVC/WSF contact in the area of DDH MR1; high AI values were recorded in some samples, however, it is unclear whether this indicates alteration or is a function of weathering. |
| 1995 (Nunn, 1995) | Honours study on "The sedimentology, volcanology and structure of the lower Dundas Group, Hall Rivulet Canal, western Tasmania". |

Table 2: Exploration on EL 5/1996 from 1996 to present

| Reporting Period | Work Completed |
|-------------------------------------|---|
| 1996-1997 (Vicary, 1997) | Relogging of old drill core; Location of a pyrite occurrence at the top of the CVC (Annaliese prospect) followed up by griding (7.1 line km), soil and rock chip sampling, mapping, S and Pb Isotope analysis, ground magnetics, IP, VLF-EM and a 306.6m DDH (ANNE001) with DHEM; no significant anomalies worthy of follow-up. Roads and tracks on remainder of tenement mapped at 1:5,000 scale. |
| 1997-98 (Vicary 1998) | 20.7 line km of griding (400m spaced lines covering the tenement) followed by mapping, rock-chip sampling, CSAMT, ground mag. and VLF-EM surveys. Historical IP data digitally compiled. 3759.3m of diamond drilling (9 holes) completed with DHEM in two holes; best result 17m @ 0.77% Zn and 0.4% Pb in WSP5. S, O and Pb isotopes on surface and drill samples; reviews of stratigraphy and alteration completed. |
| 1998-99 (Vicary and Dauth, 1999) | DHEM results for 4 holes presented; Review of Jones Creek area completed; core from Jones Creek area relogged. |
| 1999-2000 (Vicary, 2000) | No field work completed – a review of exploration by Goldfields was presented. |
| 2000-2002 McNeill (2002) | Partial leach soil sampling (881 samples collected) and surveying (with DGPS) of the existing 400m spaced Goldfields grid over the CVC/White Spur Formation contact located 2 anomalous zones worthy of follow-up. Minor extensions (2.6 line km) to the existing grid were cut preparatory to partial leach soil sampling. |
| 2002-2003 McNeill (2003) | Partial leach soil sampling (559 samples) and geological mapping of infill grid (9.5 line km cut) and extensions to the Goldfields grid over the CVC/White Spur Formation contact. This work was designed to follow-up the Central [Anomaly 2] and Northern [Anomaly 1] soil anomalies. Re-assaying of soils, from areas with anomalous partial leach results, by total digest methods (145 samples analysed). Completion of DHEM surveys in DDH YWS1, WSP6 and WSP10/10A. |
| 2003-2004 McNeill (2004) | A two loop (2.275 line km) ground EM survey was completed to follow-up the DHEM responses in YWS1 and WSP6. As a result of problems with data quality no final interpretation could be made. Some geological mapping was completed in the north of the tenement. No significant changes to the structural or stratigraphic interpretation were made and no significant alteration or mineralisation was located. The 1997 RGC CSAMT survey of the tenement was re-processed and was being re-interpreted at the time the report was compiled. |
| 2004-2005 McNeill (2005) | The YWS1/WSP6 DHEM anomaly was interpreted to result from an unusual, in Tasmania, IP effect. Additional geological mapping in the north of the tenement. DDH WSP13 (547.0m) was completed. A program of whole-rock analysis of drill core commenced. Review of the 1997 RGC CSAMT survey was completed. |

6. WORK COMPLETED 2005-2006 REPORTING PERIOD

6.1 Geology

To aid in interpreting the partial leach soil surveys, and to resolve some discrepancies in existing mapping and interpretations, a program of geological mapping and compilation of existing data continued during the reporting period. No significant changes to the structural or stratigraphic interpretation were made and no significant alteration or mineralisation has been located by mapping completed during the reporting period.

The CODES, University of Tasmania, Honours project, with student Corey Jago, on the stratigraphy of the upper CVC and basal WSF was completed. Significant conclusions were:

- Correlations between the WSF on EL 5/1996 and the hangingwall volcanoclastics at Rosebery and Hercules are possible.
- The sandstone/siltstone top to the CVC pumice breccias (Host rock equivalents) is not present (eroded away) in much of the area.
- However, sub-basins, related to syn-depositional faults, in which the host rock equivalents have been defined are present:

Between DDH WSP13 and WSP4

Between DDH WSP10 and WSP7

Between DDH ANNE01 and WSP6.

A copy of Corey's thesis, titled "Correlations of the Rosebery-Hercules host sequence at White Spur, Mount read Volcanics, western Tasmania: implications for exploration" has been forwarded to MRT.

6.2 Diamond Drilling

DDH WSP14

Early in the tenure of EL 5/1996, White Spur, Goldfields commenced a 600-800m spaced drill program to test the contact of the WSF and the CVC throughout the licence area. The programme was not completed and there remained some significant gaps in drill coverage, particularly the 1.2km strike length between DDHs WSP6 and ANNE01. This area has not been covered with ground EM, but, a CSAMT survey has been completed (and had been interpreted by Consultant J. Silic who believes it is of little value in target location). A Partial leach soil sampling survey failed to locate a significant multi-element anomaly in the area of interest, however, the reliability of this method has not been conclusively tested. It was therefore proposed to test the prospective white Spur/CVC contact approximately 300m below surface and mid-way between WSP6 and ANNE01 with a single 500m DDH.

Diamond Drill hole WSP14 was collared at 377350E, 5358864N (AGD66_55) on 09/01/2006 and completed at 494.6m on 01/02/2006. A detailed log, down hole survey details and other data are included as Appendix 1. A summary log is as follows:

Table 3: Summary Log. WSP14

| From | To | Lithology |
|--------|--------|--|
| 0.0m | 99.5m | Interbedded greywacke, lithicwacke and siltstone/shale – WSF. |
| 99.5m | 193.2m | WSF- Upward fining Mass flow unit comprising: 99.5-122.5m Volcaniclastic shard-rich? Siltstone; gradational contact to: 122.5-129.0m massive crystal-rich volcaniclastic sandstone; gradational contact to: 129.0-193.2m Volcaniclastic breccia; shale and volcanogenic clasts with fsp>qtz crystals; abrupt conformable? contact to: |
| 193.2m | 323.7m | WSF- Upward fining Mass flow unit with basal qtz phyric crystal sandstone comprising: 193.2-201.8m Volcaniclastic shard-rich? Siltstone and minor black shale; gradational contact to: 201.8-291.7m Volcaniclastic sandstone/breccia, quartz>feldspar-phyric, pumiceous with black shale and volcanogenic clasts; gradational contact to: 291.7-323.7m Volcaniclastic sandstone, quartz>feldspar-phyric abrupt broken contact to: |
| 323.7m | 372.7m | WSF- Mixed interval of thin volcaniclastic sandstone, siltstone and pumiceous breccia/mass flows. Individual cycles less than 10m thick. Trace sphalerite as small veinlets 340-350m. |
| 372.7m | 455.2m | WSF- Pyritic black shale with intermittent interbedded volcaniclastic sandstone and volcaniclastic breccia. Lower contact marked by semi-massive pyrite as irregular bands from 454.1m-455.2m. Trace sphalerite from 448m. |
| 455.2m | 494.6m | CVC- overall upwardly fining feldspar-phyric mass flow unit comprising: 455.2-459.1m Pumiceous crystal sandstone; gradational contact to: 459.1-494.6m Pumice-rich volcaniclastic sandstone to breccia. |

The interval of semi-massive pyrite from 454.1m – 455.2m is interpreted to represent the Rosebery-Hercules ‘host’ position at the base of the White Spur Formation. Whilst the presence of ‘host’ lithologies is encouraging, the ‘host’ position is thin and the upper CVC did not appear to be strongly altered or mineralised.

Sixteen samples (including one standard) from WSP14 were sent to Amdel, Adelaide to be analysed for Cu, Pb, Zn, Ag, As, Sb, Fe and Mn (by ICP), Au (by ppb fire assay) and Ba (by XRF). Sampling and assay results are included as Appendix 2.

No significant results were returned.

DDH WSP15

A regional scale Partial leach soil sampling programme was completed on EL 5/1996 and located one major coherent, multi-element (particularly Bi, As and Ag) anomaly in the northern part of the tenement (PL anomaly 1). This anomaly was considered attractive as it overlay a regionally anomalous doubly plunging syncline structure. Five drill holes (DCP235, WSP2, 11,12 and 13) had been drilled into this structure but only one (WSP13) had tested the axis of the syncline and this hole was south of the PL anomaly. The area had not been covered with ground EM but, a CSAMT survey had been completed (and had been interpreted by Consultant J. Silic who believed it was of little value in target location). It was recommended that the PL soil anomaly be tested by a single 430m hole, designed to intersect the top of the CVC (the 'Holy Host') in the centre of the PL anomaly and the axis of the 'regionally anomalous' syncline.

Diamond Drill hole WSP15 was collared at 376475E, 5363428N on 16/2/2006 and completed at 401.2m on 10/3/2006.

A detailed log, down hole survey details and other data are included as Appendix 3. A summary log is as follows:

Table4: Summary Log. WSP15

| From | To | Lithology |
|--------|--------|--|
| 0.0m | 96.4m | Graded sandstone to siltstone and interbedded graded greywacke – WSF. |
| 96.4m | 127.1m | Laminated siltstone and pyritic mudstone – WSF. |
| 127.1m | 180.0m | WSF- Upward fining Mass flow unit comprising: 127.1-144.0m Volcaniclastic shard-rich? Siltstone; gradational contact to: 144.0-168.0m Volcaniclastic feldspar-quartz phyric crystal sandstone, gradational contact to: 168.0-180.0m Poorly sorted, polymict massive mass flow. Minor sphalerite as small blebs, veinlets and small stringers. |
| 180.0m | 188.7m | Black Shale – WSF |
| 188.7m | 232.0m | Upward fining sequence comprising: 188.7-196.0m Volcaniclastic siltstone; gradational lower contact to: 196.0-205.5m Graded, polymict volcaniclastic sandstone; gradational lower contact to: 205.5-232.0m Graded volcaniclastic mass flow. Siliceous lithic clasts to 1cm. Interpreted host position. |
| 232.0m | 268.0m | CVC- overall upwardly fining feldspar-phyric mass flow unit comprising pumiceous volcaniclastic sandstone with rare volcanogenic lithics. |
| 268.0 | 401.2m | CVC- mixed feldspar phyric pumiceous sandstone and pumice breccia with sporadic mafic dykes |

Minor sphalerite-galena-pyrite mineralisation was intersected in the basal part of the mass flow unit directly overlying the black shale. The volcaniclastic unit beneath the

black shale was variably qtz-sericite altered and is interpreted to correlate with the Hercules-Rosebery host position.

Ten samples from WSP15 were sent to Busang Laboratories, Burnie to be analysed for Cu, Pb, Zn, Ag, As, Sb, Fe and Mn (by ICP), Au (by ppb fire assay) and Ba (by XRF). Sampling and assay results are included as Appendix 4.

No significant results were returned with the best result 5.0m @ 1.0% Zn from 180.0m.

An additional four samples were sent to Amdel, Adelaide for whole rock geochemical analysis. Sample details and results are included in Appendix 4. No significant alteration signatures related to VHMS mineralisation were identified.

6.3 Geophysics

Surface Fixed Loop TEM

A Fixed loop EM survey was conducted by Zonge Engineering in March/April 2005 on Zinifex's neighbouring EL11/2002 (Dundas license) The eastern most part of the survey lines crossed onto EL5/1996. No anomalies were identified on EL5/1996. The logistics reports, loop locations and survey results are included as Appendix 5.

DHEM

During the reporting period DHEM surveys were completed in DDH WSP12 and 13 (by Zonge Engineering in April 2005), and DDH WSP14 and 15 (by Outer-Rim Exploration Services in February and April 2006). Logistics reports, loop locations and survey results are included as Appendix 5. No significant off-hole conductors were located by these surveys.

7. CONCLUSIONS & RECOMMENDATIONS

Work completed during the life of EL 5/1996 White Spur has included:

- 4,065.9m in 10 holes by Goldfields and 1,442.8m in three holes by Zinifex (additional to 1,845m in 7 holes completed by previous explorers) testing the CVC/WSF contact, to a depth of 250-400m, on 600-800m centres throughout the licence.
- Geological mapping of the western and central part of the licence and detailed stratigraphic interpretation. Digital compilation of previous exploration data. Collection of whole-rock geochemical data and some S, O, and Pb isotope data.
- B Horizon partial leach soil geochemistry over the bulk of the licence on 200-400m spaced lines (1,440 samples, including standards and duplicates; 145 of which were re-assayed by total digest methods). One significant anomaly was located and drill tested.
- A 20.7 line km CSAMT, VLF-EM and ground magnetic survey with IP completed over the Annaliese prospect grid and a single loop of fixed-loop time-domain EM to follow-up DHEM responses in DDH YWS1 and WSP6.
- DHEM completed in all holes drilled (and YWS1 which had not previously been surveyed).
- An Honours study to assess the nature of the WSF/CVC contact throughout the area, with the aim of determining where the top of the CVC (i.e., Rosebery and Hercules host rock equivalents) is preserved and where it has been eroded away.

This work has failed to locate any significant (ore-grade and width) mineralisation or alteration, leading to the conclusion that there is no significant VHMS mineralisation at the target CVC/WSF contact and that this contact has probably been effectively tested to a depth of 250-400m throughout most of the licence.

8. ENVIRONMENT AND REHABILITATION

Surface disturbance activities undertaken during the reporting period comprised:

- One drill pad including two in-ground sumps at the WSP14 site, immediately off the Halls Rivulet Canal track;
- One drill pad at the WSP15 site.

The WSP14 site has been fully rehabilitated with the drill collar capped, the in-ground sumps backfilled and the drillpad cleared and covered with Ti-tree slash (Plate 1).

The WSP 15 site has been rehabilitated and the collar capped. At the time of writing, an above ground sump remained at the WSP15 site, which is scheduled for removal in late August 2006.



Plate 1: WSP14 Site immediately after rehabilitation. Located adjacent to HEC track

9. EXPENDITURE

Total expenditure for all work undertaken by Zinifex Rosebery Mine within White Spur EL 5/1996, for the period 05/04/05 to 30/06/06 was \$263,364.11. A detailed expenditure statement is given below.

| | |
|-------------------------------|---------------------|
| Computing | \$450.50 |
| Drilling | \$149,595.85 |
| Geochemical Assays | \$129.20 |
| Geoscience Consultants | \$2,090.00 |
| Geophysics | \$16,817.31 |
| Depreciation, Office, Sundry | \$893.64 |
| Other Contractors | \$36,099.50 |
| Personnel Costs | \$22,120.62 |
| Stores & Supplies | \$7,657.50 |
| Travel & Accommodation | \$247.80 |
| Vehicles, Plant & Maintenance | \$3,320.00 |
| Administration Fee 10% | \$23,942.19 |
| Total | \$263,364.11 |

10. KEYWORDS & LOCALITY

Keywords

WHITE SPUR, GEOPHYSICS – EM, GEOPHYSICS – CSAMT, GEOLOGY, WHITE SPUR FORMATION, CENTRAL VOLCANIC COMPLEX, MOUNT READ VOLCANICS

Locality

1:250,000 QUEENSTOWN SK55-5
1:100,000 SOPHIA 8014, PIEMAN 7914
1:25,000 OCEANA 3635, DUNDAS 3636

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